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09/875,833	06/05/2001	Carl Taussig	10003477	7789

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EXAMINER

CHOI, WOO H

ART UNIT

PAPER NUMBER

2186

DATE MAILED: 03/11/2004

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/875,833	TAUSSIG ET AL.
	Examiner	Art Unit
	Woo H. Choi	2186

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 05 June 2001.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-35 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-35 is/are rejected.
 7) Claim(s) 20 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 35 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 35 claims a method while its parent claim 24 claims a data storage device.

Claim Objections

3. Claim 20 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claim is identical to one of the parent claims, claim 18.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 – 8, 11 – 13, 17 – 20, 22 – 24, 28 – 32, and 34 are rejected under 35

U.S.C. 102(e) as being anticipated by Hashimoto *et al.* (US Patent No. 6,344,875, hereinafter “Hashimoto”).

6. With respect to claims 1 – 4, 11, 17, 28, 31 Hashimoto discloses a data storage device for a digital camera (figure 8), comprising:

a temporary data storage circuit coupled, in use, to receive image data from the camera (figure 10, buffers 41 in memory card 16);

a permanent data storage circuit (figure 10, flash memory 40) coupled, in use, to receive image data from the temporary data storage circuit (figure 16); and

a control circuit (the control circuit that controls the transfer of data between the buffers 41 and the flash 40 is not specifically shown but is inherent) coupled to the temporary data storage circuit and the permanent data storage circuit, the control circuit being adapted to effect transfer of image data from the temporary data storage circuit to the permanent data storage circuit upon occurrence of a predetermined event (figure 16, step 340, and also step 348).

7. With respect to claims 6, 18 – 20, the permanent data storage circuit comprises a non-volatile memory module that is replaceable in the interface card to allow a plurality of different memory modules to be used in a single data storage system (figure 10, flash modules are in the interface card, they are replaceable since the entire card is detachable thus replaceable, they are also replaceable from within the interface card since the card is manufactured by assembling

different components together into a single card and the flash module is one of the component that can be replaced with any other flash module of same kind while being assembled or repaired, a plurality of different modules are allowed to be used in a single card).

8. With respect to claims 12, 23 and 29 the predetermined event (figure 16, step 348, writing image file in memory card) comprises a predetermined time period elapsed from the data being received in the temporary data storage circuit from the data generating appliance (writing image file in memory card involves transfer of data from the camera to the flash memory 40 through the buffer 41 with inherent transmission delay).
9. With respect to claim 13, 24 and 30, the predetermined event (figure 16, step 384) comprises further data being received by the temporary data storage circuit from the data generating appliance writing (writing image file involves reception of further data by the buffer until the entire file is received and written to the flash memory).
10. With respect to claim 32, the permanent data storage circuit is contained in a memory module that is removable from the interface card (since the card is manufactured by assembling different components together into a single card and the flash module is one of the component that can be removed and replaced with any other flash module of same kind while being assembled or repaired).

11. With respect to claim 34, the temporary data storage to circuit comprises RAM (col. 9, lines 24 – 26).

12. With respect to claims 5 and 18, Hashimoto discloses a data storage system for a portable data generating appliance (figure 8, digital camera) comprising:

a temporary data storage circuit (figure 8, 13) coupled, in use, to receive data from the appliance;

a permanent data storage circuit (16) coupled, in use, to receive data from the temporary data storage circuit; and

a control circuit (14) coupled to the temporary data storage circuit and the permanent data storage circuit, the control circuit being adapted to effect transfer of data from the temporary data storage circuit to the permanent data storage circuit.

wherein the permanent data storage circuit comprises a non-volatile memory module that is detachably coupled to the data storage system to allow a plurality of different memory modules to be used in a single data storage system (memory card 16 is detachably coupled).

13. With respect to claims 7, 8 and 22, Hashimoto discloses a data storage device for a digital camera (figure 8), comprising:

a temporary data storage circuit (13) coupled, in use, to receive image data from the camera;

a permanent data storage circuit (16) coupled, in use, to receive image data from the temporary data storage circuit; and

a control circuit (14) coupled to the temporary data storage circuit and the permanent data storage circuit, the control circuit being adapted to effect transfer of image data from the temporary data storage circuit to the permanent data storage circuit upon occurrence of a predetermined event (figure 16, step 340).

wherein the temporary data storage circuit comprises RAM (col. 8, lines 47 – 49) with capacity sufficient to store image data for at least one picture from the camera (figure 16, step 342).

14. Claims 9 – 10 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Parulski *et al.* (US Patent Application No. 2001/0013894, hereinafter “Parulski”).

Parulski discloses a data storage system for a portable data generating appliance (figure 4) comprising:

a temporary data storage circuit (flash memory card 330)coupled, in use, to receive data from the appliance, wherein the temporary data storage circuit comprises Flash memory;

a permanent data storage circuit (printer 30) coupled, in use, to receive data from the temporary data storage circuit, wherein the permanent data storage circuit comprises non-volatile write-once memory; and

a control circuit coupled to the temporary data storage circuit and the permanent data storage circuit, the control circuit being adapted to effect transfer of data from the temporary data storage circuit to the permanent data storage circuit (figure 6).

15. Claims 10, 21, and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Tringali *et al.* (US Patent No. 6,545,891, hereinafter “Tringali”).

Tringali discloses a data storage system for a portable data generating appliance (figure 7) comprising:

a temporary data storage circuit (figure 6, data xfer buffer, lower right corner)coupled, in use, to receive data from the appliance;

a permanent data storage circuit (figure 2, 16, col. 2, line 27) coupled, in use, to receive data from the temporary data storage circuit, wherein the permanent data storage circuit comprises non-volatile write-once memory (col. 1, lines 44 – 46); and

a control circuit coupled to the temporary data storage circuit and the permanent data storage circuit, the control circuit being adapted to effect transfer of data from the temporary data storage circuit to the permanent data storage circuit (figure 6).

The data storage system is for digital camera and comprises a removable interface card (figure 1, and col. 2, line 11 – 16). The permanent data store storage circuit is contained in a memory module that is removable from the interface card (figure 2, 16, shows memory chip socket).

16 Claims 14 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Araki *et al.* (US Patent No. 6,388,908, hereinafter “Araki”).

Araki discloses a data storage device for a digital camera (figure 1, 7, and col. 5, lines 55 – 58), comprising:

a temporary data storage circuit coupled, in use, to receive image data from the camera (figure 2, buffers BF);

a permanent data storage circuit (figure 2, flash memory MC) coupled, in use, to receive image data from the temporary data storage circuit; and

a control circuit (the control circuit that controls the transfer of data between the buffers and the flash memory modules is not specifically shown but is inherent) coupled to the temporary data storage circuit and the permanent data storage circuit, the control circuit being adapted to effect transfer of image data from the temporary data storage circuit to the permanent data storage circuit upon occurrence of a predetermined event (col. 9, lines 46 – 65, write data event),

wherein the predetermined event comprises further image data being received by the temporary data storage circuit from the camera (figure 8, steps S2, S3, S5 and S7).

wherein the control circuit is effective to simultaneously control transfer (figure 8, S3 and S4 occur simultaneously) of image data from the temporary data storage circuit to the permanent data storage circuit (S4) and transfer said further image data from the camera into the temporary data storage circuit (S3).

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohki (US Patent Application No. 2002/0001032) in view of Parulski.

Ohki discloses a method for image data storage in a digital camera, comprising:

obtaining image data generated by the digital camera representing at least one picture (figures 1 and 2, 24);

storing said image data in a temporary data storage (figure 2, 4) circuit coupled to the digital camera; and transferring said image data from said temporary data storage circuit to a permanent data storage circuit (figure 1, printer 40) coupled to the digital camera upon occurrence of a predetermined event (image print event).

wherein said permanent data storage circuit are contained in an interface card that is removable from the digital camera.

wherein the permanent data storage circuit is contained in a memory module that is removable from the interface card.

wherein the permanent data storage circuit comprises write-once memory.

However, Ohki does not specifically disclose that both the temporary storage and the permanent storage circuits are contained in an interface card that is removable from the digital camera. On the other hand Parulski discloses a method for data storage in a digital camera where

a temporary data storage circuit (Parulski, figure 2, image memory 38 in printer 30) and the permanent data storage circuit are contained in an interface that is removable from the digital camera.

It would have been obvious to one of ordinary skill in the art, having the teachings of Ohki and Parulski before him at the time the invention was made, to use the image buffer in the image printer teachings of the digital camera with printer of Parulski in the digital camera with printer of Ohki, in order to accommodate the difference in print speed and data transfer speed.

19. Claims 15 – 16, 26 – 27, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Levy (US Patent No. 5,438,549).

Hashimoto discloses all of the limitations of the independent parent claims as discussed above. Hashimoto's data storage device derives primary operating power from the camera. However, Hashimoto does not specifically disclose that the predetermined event comprises disconnection of power supply from the camera to the data storage device. On the other hand, Levy discloses a memory storage (figure 2) device that transfers data from the temporary data storage circuit (23) to the permanent data storage circuit (21) upon occurrence of disconnection of power supply (col.2, lines 18 – 22).

Levy's device includes a short term power supply circuit adapted to supply power to the data storage system sufficient to transfer the data contents of the temporary data storage circuit to the permanent data storage circuit (figure 3, 30).

It would have been obvious to one of ordinary skill in the art, having the teachings of Hashimoto and Levy before him at the time the invention was made, to use the flash memory with battery backup teachings of Levy in the flash memory card of Hashimoto, in order to maintain data integrity of a memory device during loss of power (Levy, col. 2, lines 9 – 12).

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Friedman *et al.* (US Patent No. 6,584,541) disclose a removable write-once memory for digital cameras. Jigour *et al.* (US Patent No. 5,815,426) and Bracken *et al.* (US Patent No. 5,943 and US Patent Application Publication No. 2002/0085300) disclose other detacheable digital image storage devices with removable permanent memory.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Woo H. Choi whose telephone number is (703) 305-3845. The examiner can normally be reached on M-F, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on (703) 305-3821. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2186

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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March 5, 2004



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